

Notice of Allowability

Application No.

09/614,535

Examiner

Daniel Swerdlow

Applicant(s)

SHAFFER ET AL.

Art Unit

2646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to after final amendment filed 8 June 2005.
2. ☒ The allowed claim(s) is/are 1,2,5-16 and 47-65.
3. ☒ The drawings filed on 11 July 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:
2. Regarding Claim 1, Minami discloses receiving a right channel voice signal and a left channel voice signal (i.e., concurrently captured first and second sound field signals) of a speaker's voice (i.e., representing a single sound field) with right and left channel microphones (i.e., at two spatially separated points) (Fig. 4, reference 1R, 1L; column 4, lines 29-32; column 6, lines 16-18). Minami further discloses an analog to digital converter (Fig. 4, reference 26R; column 6, lines 19-22) that converts the right channel voice signal to a digital signal (i.e., digitally encodes a signal block to represent the sound field signals). Minami further discloses an approximator (Fig. 4, reference 30; column 6, lines 24-54) that approximates a transfer function between the right channel voice signal and the left channel voice signal (i.e., estimates relative temporal delay between first and second sound field signals). Minami further discloses a transmitter (Fig. 4, reference 35; column 7, lines 24-30) that transmits the right channel voice signal (i.e., the encoded signal block) and transfer function information (i.e., stereo decoding parameter) to a receiving end (i.e., remote conferencing point). Weinstein teaches that packet networks offer significant benefits for voice communication including cost and channel capacity savings (p. 963, column 2). Coker discloses sound source location by cross correlating two microphone inputs over a series of time intervals (i.e., a plurality of time shifts) (column 2, lines 36-43) and selecting the delay with the greatest correlation (column 9, lines 60-64). Coker further teaches deriving delay from energy burst pulses in response to speech sounds, but fails to disclose limiting the variation of the estimated relative temporal delay during a talkspurt. Because the prior art does not disclose or fairly suggest all limitations, the claim is allowable.

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3. Claims 2 and 5 through 16 are allowable due to dependence from Claim 1.

4. Regarding Claim 47, Minami discloses a separator (i.e., parser) (Fig. 4, reference 36; column 7, lines 35-37) that separates the right channel voice signal (i.e., encoded signal block) and the additional data (i.e., stereo decoding parameter). Minami further discloses an ADPCM circuit (i.e., decoder) (Fig. 4, reference 37; column 7, lines 34-35) that decodes the right channel voice signal (i.e., receives and decodes signal blocks) to produce a decoded signal (i.e., voice sample stream). Minami further discloses the filter (i.e., splitter) (Fig. 4, reference 41; column 7, lines 41-43) that is coupled to the right channel voice signal (i.e., voice sample stream) and uses the tap coefficients (i.e., stereo decoding parameter) to produce the left channel voice signal (i.e., create multiple output signal channels based on the voice sample stream). Weinstein teaches that packet networks offer significant benefits for voice communication including cost and channel capacity savings (p. 963, column 2). However, Minami discloses stereo information integrated as a frequency domain transfer function and fails to disclose or fairly suggest the explicit parameters claimed. While the parameter types (i.e., delay, balance or angle) are claimed in the simple alternative, the prior art presents none of these parameters explicitly. Rather, any information used to create stereo effect in the prior art is embedded in the frequency domain transfer function and, therefore does not comprise explicit parameters. Therefore, Claim 47 is allowable matter.

5. Claims 54, 58 and 62 are essentially similar to Claim 47 and are allowable for the same reasons.

6. Claims 48 through 53, 55 through 57, 59 through 61 and 63 through 65 are allowable due to dependence from their respective base claims.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 571-272-7531. The examiner can normally be reached on Monday through Friday between 7:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh H. Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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22 June 2005



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SUPERVISORY PATENT EXAMINER